



U.S. DEPARTMENT OF
ENERGY

Office of
Science

Office of Project Assessment
CD-3b Review Report on the

Utilities Upgrade Project (UUP)

at Fermi National Accelerator Laboratory

August 2015

EXECUTIVE SUMMARY

A Department of Energy/Office of Science (DOE/SC) review of the Utilities Upgrade Project (UUP) was conducted on August 11-12, 2015 at Fermi National Accelerator Laboratory (FNAL). The review was conducted by the Office of Project Assessment (OPA) and chaired by Raymond Won, OPA at the request of Stephanie A. Short, Associate Deputy Director of for Field Operations. The purpose of the review was to assess the project's overall readiness for Critical Decision (CD) 3b, Approve Start of Construction – Phase B.

In general, the UUP team is making progress; however, the schedule for disconnecting electrical service is tight and bids for threshold scope are high, while construction authorization is sought for buy-down options and miscellaneous changes. The team plans to fund \$2.2 million of overages from a combination of \$1.7 million of unneeded budget (see Management section for details) and \$0.5 million of contingency. Overall, the Committee judged that the project has a high likelihood of being delivered within the Total Project Cost, but not within the Total Estimated Cost. As a consequence, the project is considered ready to proceed to CD-3b after preparing cost and schedule impacts of re-planning utility isolation by Consolidated Edison prior to BCR007 and recommending a path forward.

Technical

Designs and specifications are complete and sufficient to exceed the threshold Key Performance Parameters. Solicitation packages are appropriate for scope identified in the Project Execution Plan, and bids are in hand. Responses to recommendations from prior reviews are complete.

Development of a Master Substation energization plan should be considered early in construction. A robust contingency plan appears desirable for managing unidentified or abandoned utilities and contaminated or unsuitable soils during excavation. Factory tests of major electrical equipment should be witnessed to the extent practicable. The National Environmental Policy Act (NEPA) Environmental Review form should be updated to include the risk of encountering legacy issues or activated soils during excavation.

Environment, Safety and Health (ES&H)

Integrated Safety Management principles are properly addressed throughout project documents, and the required documentation and permits for CD-3b are complete. A portable eyewash and drench hose was supplied in response to a recommendation from CD-2/3a. Subcontractors will be subject to new Occupational Safety and Health Administration (OSHA) regulations regarding confined space.

The team should consider requiring a full-time subcontractor ES&H representative throughout the project, in lieu of when headcount exceeds 20, due to risks such as work on high voltage systems, excavations, lifts, overhead lines, and simultaneous work in multiple locations.

Cost and Schedule

Project documentation required for CD-3b has been prepared; however, the project needs to prepare an analysis of the potential cost and schedule impacts of missing the Commonwealth Edison disconnect date for the High Voltage (HV) work. The project baseline includes a Total Estimated Cost of \$34.9K and a Total Project Cost of \$36.0K. The CD-3a approved the long-lead procurement for the fabrication of a Master Substation Control Building. Construction funds in the amount of \$7K were allocated for this work and the work was subcontracted for \$5.6K. Bids for the industrial cooling water (ICW) and remaining HV work total approximately \$15.8K, which is 11% higher than project estimates. The project has bids for an estimated \$4.5K of scope additions. The project team indicated that a notice to proceed is needed by early October for Consolidated Edison to disconnect electrical service. The project schedule identifies 18-months for construction and 18-months of schedule contingency to CD-4.

Management

Bid solicitation packages for the HV electrical and ICW upgrades are sufficient to achieve the threshold Key Performance Parameters (KPPs) of the project and four objective KPPs. Base scope bids were, in aggregate, 11.0% higher than the baseline. The project team plans to fund \$2.2 million of overages by reducing \$1.7 million of unnecessary funding for soft costs, project engineering and design, and escalation (ref. baseline change request BCR0007), and spending \$0.5 million of contingency funding. The proposed BCR007 would reduce soft costs, project engineering and design, and escalation from 46% to 38%. The laboratory identified other opportunities that may further reduce costs to 29%. A thorough review of the cost and schedule impacts for re-planning utility isolation by Consolidated Edison should be completed prior to approving BCR0007.

Key Recommendation

- Proceed to CD-3b after preparing cost and schedule impacts of re-planning utility isolation by Consolidated Edison prior to BCR007 and recommending a path forward.

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1. INTRODUCTION

The Utilities Upgrade Project (UUP) at Fermi National Accelerator Laboratory (FNAL) is a Department of Energy (DOE) line item project that will replace portions of the high voltage (HV) electrical and industrial cooling water (ICW) systems at FNAL. The objective of the project is to provide a dependable utility infrastructure from which science can be accomplished.

The UUP project obtained approval of Critical Decision (CD) 0, Approve Mission Need, on September 18, 2009; CD-1, Approve Alternative Selection and Cost Range, on November 15, 2010; and CD-2/3a, Approve Performance Baseline and Approve Start of Construction, Phase A, on February 18, 2015. In a June 11, 2015, memorandum, Ms. Stephanie Short, Associate Deputy Director for Field Operations, requested that the Office of Project Assessment (OPA) conduct an Independent Project Review to assess UUP's readiness for CD-3b, Approve Start of Construction, Phase B.

The scope of Phase A of this project was the procurement, delivery, and installation of the pre-manufactured Master Substation Control Building. The scope of Phase B consists of the remainder of the project, including the substation foundation, wiring and commissioning, as well as replacement of the main cooling water pipeline "backbone" from Casey's Pond, on the North end of the site, to the main injector ICW system, near Wilson Hall. Additional upgrades to these systems (e.g., replacing components at or near end of service life, upgrading the distribution networks with secondary distribution, providing additional valves, pumps, or switchgear) may be executed if the project experiences favorable cost and schedule performance.

The purpose of this review was to assess all aspects of the project—technical, cost, schedule, management, and Environment, Safety and Health (ES&H)—in preparation for CD-3b.

2. TECHNICAL

2.1 Findings and Comments

The scope of work consists of upgrades to the High Voltage (HV) Electrical and Industrial Chilled Water (ICW) systems. Design drawings and specifications are complete, as are responses to recommendations from the previous DOE/SC reviews and independent design reviews. The Committee found that the design documents appear to be appropriate overall for CD-3b.

CD-3a previously approved construction of the Master Substation Control Building. The building is on track for delivery by February 15, 2016 and installation by March 22, 2016. Bids are in-hand for the HV and ICW scope of CD-3b, including buy-down options for each system. BCR007 is prepared to add two high-priority buy-down options to the approved project scope (ICW Makeup Water Improvements, and HV Main Breaker).

Initial Utility Isolation Plans and Traffic Control Plans are complete and were included with the bid documents. Touch points between the HV and ICW scopes have been coordinated and well documented. The touch points and responsibilities between the HV installation subcontractor and the MSS manufacturer have been delineated well in the construction documents.

Responses to most recommendations are complete; however, the project team should continue to closely monitor the Master Substation Control Building activity to avoid delays and added costs. The team should consider how to respond if the ICW subcontractor intends to use a more aggressive schedule than planned.

Development of a Master Substation energization plan should be considered early in construction. A robust contingency plan appears desirable for managing unidentified or abandoned utilities and contaminated or unsuitable soils during excavation. Factory tests of major electrical equipment should be witnessed to the extent practicable. The National Environmental Policy Act (NEPA) Environmental Review form should be updated to include the risk of encountering legacy issues or activated soils during excavation.

2.2 Recommendation

1. Proceed to CD-3b.

3. ENVIRONMENT, SAFETY and HEALTH

3.1 Findings

The project documentation appropriate for CD-3b approval is complete, including:

- Hazard Analysis Report (HAR)
- Quality Assurance Plan (QAP)
- Construction Project Safety and Health Plan (CPSHC)
- Security Vulnerability Assessment Report

The Fermilab Integrated Safety Management (ISM) Program has obtained certification and is a registered Occupational Health and Safety Assessment (OSHA) Series 18001 Plan.

A full-time construction coordinator will oversee the UUP. The construction coordinator has over 40 years of field experience, including projects nearly identical to the scope in this project. He has trained others on excavation safety at FNAL. He was also the construction coordinator for the Kautz Road Substation project in the mid-1990's.

An ES&H coordinator has been assigned to support the project. He is budgeted at 0.25 FTE. He is supported by personnel from the central FNAL ESH&Q organization.

ES&H funding appears low for a project of this size. The project staff stated that several personnel with overall safety responsibilities are covered through indirect sources and so the ES&H funding is under-stated in the project budget.

ISM principles are appropriately integrated.

All necessary permits are complete and in place, to include:

- NEPA categorical exclusion (see Technical)
- Illinois Environmental Protection Agency Stormwater Pollution Prevention Plan (SWPPP)
- U.S. Army Corps of Engineers, Utilities Upgrade Project and Electrical Substation Improvements Site Review has been completed—determination was made that no USACE permit is required

The CPSHC appropriately incorporates ISM principles. It also requires that subcontractors:

- Develop a Site Specific Construction Safety and Health Plan.
- Develop an Excavation Plan complying with OSHA 1926 Subpart P, Excavations. Excavation permits are issued prior to commencement of subsurface excavations.

Surveys have been conducted for PCBs (polychlorinated biphenyls) and lead paint. None has been found.

Asbestos was detected in panels in the substation basement. The panels are to be mitigated and removed by FNAL's asbestos contractor prior to UUP work start.

Removal of the capacitor tree, communications tower, and placement of the control building require development of lift plans.

Subcontractors work under FNAL's approved Worker Safety and Health Program description, as per 10 CFR 851. FNAL-specific ES&H requirements are flowed down to the subcontractors through Terms and Conditions and the CPSHC.

Recent changes in the OSHA regulations related to confined space were acknowledged by project ES&H staff. Subcontractors are required to comply with OSHA regulations.

The UUP ES&H staff stated that the health physics technicians will check the soil in the area around the directional boring planned across the beamline.

The UUP construction coordinator stated that ICW trenching work would be staged when the main electrical system is shutdown to minimize hazards associated with overhead lines.

Both the HV and ICW work will result in spoils removal. The ICW contractor has the primary responsibility for maintaining the dump site. Project staff stated that there are no overhead hazards in the vicinity of the dump site.

Commonwealth Edison is under contract to perform shutdown of the main feeder to the Main Substation. FNAL and Commonwealth Edison maintain agreements to understand delineations in their work.

The closeout for CD-2/3a recommended that an eyewash and safety shower be provided in the Substation facility—this has been addressed. Project specifications were revised to specify a portable self-contained, pressurized, 15-gallon capacity, stainless steel tank, twin chrome-plated brass soft flow eyewash heads (flow rate 0.4gpm @ 30psi) with eight foot drench hose (flow rate 3.0gpm @ 30psi). This meets ANSI Z358.1-2009.

3.2 Comments

The project team should incorporate lessons learned from other FNAL projects and around the DOE complex to be ready for unanticipated issues.

Hydrostatic pressure testing is planned for a representative sampling of ICW pipe installation. This activity is not covered by the HAR. The project will need to ensure hazards are appropriately mitigated in job specific safety analyses prepared by the subcontractor.

The QAP addresses suspect/counterfeit items (S/CI), but increased focus on electrical componentry is suggested (e.g., circuit breakers, semi-conductors, transformers, fuses, resistors, switchgear, relays, motor control centers, etc.).

The CD-2/3a review recommended:

Include a subcontractor safety representative in the ICW and MSS projects. It would be prudent to have a subcontractor safety representative for the entire project except perhaps low risk phases, if any, of the ICW and MSS projects. Explicit safety representative qualifications should be listed in the project specifications.

The project requires an onsite full-time safety representative when the subcontractor headcount exceeds 20. The safety representative is required to have:

- 10 years of construction experience,
- 3 years of safety experience, and
- OSHA 30 hour construction safety training.

When more than 20 persons are onsite, a competent person with OSHA 30 hour training is required. It is not clear how the “20 person” rule equates to “risk”. The Committee strongly suggested that a subcontractor ES&H representative be present for the entire project. Especially considering the risks associated with the lifts, installation of building, electrical work, and excavations under overhead electrical lines, etc.

3.3 Recommendation

2. Proceed to CD-3b.

4. COST and SCHEDULE

Project documentation required for CD-3b has been prepared; however, the project needs to prepare an analysis of the potential cost and schedule impacts of missing the Commonwealth Edison disconnect date for the HV work. The project baseline includes a Total Estimated Cost (TEC) of \$34.9K and a Total Project Cost (TPC) of \$36.0K. The CD-3a approved the long-lead procurement for the fabrication of a Master Substation Control Building. \$7.0K of Construction funds were allocated for this work and the work was subcontracted for \$5.6K. Bids for the ICW and remaining HV work total approximately \$15.8K, which is 11% higher than project estimates. The project has bids for an estimated \$4,500K of scope additions. The project schedule identifies 18-months for construction and 18-months of schedule contingency to CD-4. The project TEC is fully funded.

4.1 Findings

PROJECT STATUS as of June 30, 2015		
Project Type	Line Item	
CD-1	Planned: Nov 2010	Actual: 11/15/2010
CD-2/3A	Planned: Jan 2015	Actual: 02/18/2015
CD-3B	Planned: Aug 2015	Actual:
CD-4	Planned: July 2017	Actual:
TPC Percent Complete	Planned: 19.35%	Actual: 19.44%
TPC Cost to Date	\$ 6,051,559	
TPC Committed to Date	\$ 10,978,351	
TPC	\$ 36,000,000	
TEC	\$ 34,900,000	
Contingency Cost (w/Mgmt Reserve)	\$ 4,664,284	18.5% on ETC
Contingency Schedule on CD-4	18 months	
CPI Cumulative	1.00	
SPI Cumulative	1.00	

The applicable objective for this review is to obtain Project Management Executive (PME) approval of the project's overall readiness for Critical Decision (CD) 3b, Approve Start of Construction—Phase B. A Total Project Cost (TPC) of \$36.0 million has been included in the project baseline, which includes a Total Estimated Cost (TEC) of \$34.9 million, contingency of \$4.66 million (18.5 percent) and Other Project Costs (OPC) of \$1.1 million. The Project Execution Plan (PEP) CD-3b Level 1 milestone date is December 2015. The current project schedule provides schedule contingency of 18 months on the PEP CD-4 Level 1 milestone date of January 2019.

The project baseline was supported by two reconciled cost estimates. The first estimate was performed by the Architect/Engineer (A/E) firm responsible for the design. A second estimate was provided by an independent A/E firm. The two estimates were reconciled as means of validating the TPC and Performance Measurement Baseline (PMB). During the reconciliation process, the higher of the two estimates was assigned to the final estimate. The PMB for the substation procurement is supported by the subcontract in place for fabrication and delivery. Bids for the remaining HV and the ICW have been received and are about 11% higher than the PMB. The project has proposed lowering of Level of Effort (LOE) budgeting in the Project Management (PM) Work Breakdown Structure (WBS) and converting unused Project Engineering and Design (PED) funds to contingency to off-set the cost of high bids. Lowering of PM budgets is consistent with a recent Director's review comment that pointed out high, soft costs on the project. This proposed reduction in PM LOE resources will lower the soft cost percentage to a level typical for this type of project.

The project Risk Registry contains 29 itemized entries mapped to the project WBS elements. Six of these risk entries have been retired at a value of \$0.531 million. The highest identified risks were associated with owner or material schedule delays and unforeseen conditions found during the ICW work. The project team completed a Monte Carlo analysis, which projected a need for 10.4 months of schedule contingency and cost contingency of \$1.63 million with an 80% confidence level. The projects 18 months of schedule contingency and \$4.66 million of cost contingency supports the current risk registry.

Due to high bids, the project baseline will need to be adjusted via Change Control to achieve the Threshold KPPs. Scope additions totaling \$17 million have been identified and the project has the bids for \$4.5 million of this scope. A Scope Enhancement Plan has been developed by the project, which presents a plan for exercising these scope options.

The project schedule is being managed using Primavera. The current baseline schedule identified 190 activities. The project start and finish activities are the only two with missing logic. The critical path has been identified as the ICW construction, which is being properly managed. The project schedule identifies three Level 1 Milestones, eight Level 2 Milestones, and twelve Level 3 Milestones. All milestones listed in the PEP are noted in the project baseline schedule with exception of those completed prior to CD-2/3a approval. The project schedule has no hard constraints and has limited use of lags.

4.2 Comments

The wording of the milestones listed in the PEP is not consistent with those contained in the project baseline schedule. The project should consider adjusting them to be consistent to avoid confusion.

Applying the principles of the 32 guidelines of Earned Value Management (EVM) is an important aspect for all DOE Order 413 3.b projects. A baseline change request (BCR006), implemented in May 2015, changed the finish date for activity 6003.01.02.1045 from April 30, 2015 to August 28, 2015. This activity had started on April 15, 2015. As such, it is not

consistent with EVMS principles to incorporate change control whereby history is changed; therefore, activities which are already past their start date/finish date should not be altered.

While there were a very low number of lags on non-milestone activities, the project should consider converting lags to activities on non-milestone tasks. This is considered a best practice.

The project activity for the procurement of the Master Substation Building has a long-duration and high cost, which makes getting objective earned value information difficult. For the purposes of taking objective earned value credit for completion of this work, the project should consider either breaking this activity down into smaller activities or showing steps in Primavera as to how earned value is taken. This approach should be applied when incorporating construction schedules for existing planning packages.

CD-3a authorized the procurement of the Master Substation Control Building. This authorization did not include the utility, Commonwealth Edison, disconnection effort required prior to commencement of the on-site HV work. The project should incorporate this in the project schedule.

Consider general housekeeping on Baseline Change documentation to ensure transparency, as well as continuous improvement:

- Adding the implementation month to the Change Control Log and Work Authorization Documents (WADs)
- Include Control Account totals on all backup documentation so the delta is traceable
- Show a running total of contingency remaining in the Change Control Log
- Include prior budget on WADs
- Rather than combining several items on one Change Request consider using individual requests to allow for ease in traceability
- Employ change control for “resetting” of each \$0.5 million by the Federal Project Director (FPD) as required by the PEP

4.3 Recommendation

3. Prior to convening the Energy Systems Acquisition Advisory Board (ESAAB) the project should prepare both a cost and schedule impact consistent with missing the target Commonwealth Edison disconnection date. Additionally, a recommendation for a path forward by the project should be provided in the event this target date is missed.

5. PROJECT MANAGEMENT

5.1 Findings and Comments

Management performance is good and the project has been adequately staffed to support the successful completion of the project. The organization charts show that the associate Project Managers (Level 2) are responsible for managing their respective design and construction scopes, Organization Charts are included below. The project team's professional and general project management abilities are strong enough to allow it to execute the project in compliance with DOE Order 413.3B with the support of personnel at FNAL experienced in DOE Order 413.3B projects.

At this stage of the project, the project scope, if successfully completed per the bid solicitation package, is sufficient to achieve the project's Threshold KPPs as noted in the approved PEP. Additionally, the project has identified \$17.0 million in buy down scope consistent with the objective KPPs. Bidding of objective scope as options to the base contract for buy down planning is a best practice. The bid solicitation package included objective scope buy down including:

- Replace all remaining site-wide oil switches with new air switches
- Replace Master substation 345kV circuit breaker
- Perform pond system improvements to increase ICW storage capacity
- Perform Casey's Pond pump house improvements

The buy down scope should be developed into a buy down plan coordinated with risk management plan and risk retirement to ensure there is sufficient schedule for design, procurement, and execution of each objective scope item within the CD-4 schedule.

Bids have been received for the Threshold and four Objective scope items listed above. Bids for HV and ICW construction were received on June 15, 2015 with a Best and Final Offer received on July 9, 2015. Base scope bids were, in aggregate, 11.0% higher than the project estimates and performance baseline. The Committee understood that the driver for high bids was the market place and the project reported that FNAL is experiencing higher bids than estimated in other areas. The base scope bids did not appear to have any anomalies with the bid profile to indicate that the bids were out of sync with one another.

The Committee was in agreement with the projects use of contingency to fund the higher bids. Incorporation of baseline change BCR007 accommodates the \$0.5 million cost impact related to high bids through utilization of contingency.

The BCR007 reduces the proposed EDIA to 38%. Soft costs should be closely tracked and evaluated to determine if further re-planning of soft costs could support additional buy down scope.

CD-3a authorized "the procurement and delivery of the pre-manufactured Master Substation Control Building." The required utility isolations for installation of the Master Substation Control Building is not part of the approved CD-3a scope. A thorough review of the cost and

schedule impacts for re-planning utility isolation to be performed by Commonwealth Edison should be completed prior to approval of a Baseline Change Proposal (BCP) required incorporating BCR007.

Utilization of the term ‘Baseline Change Request (BCR000X)’ for processing and approval of project PMB change requests is easily confused with the requirements of the PEP Section 6.0 required Baseline Change Control (table 10) requirements for processing of Baseline Change Proposals (BCP). A BCP should be implemented per the requirements of PEP Section 6.0 Baseline Change Control and not for modification of the performance measurement baseline.

The change log for updated documents (i.e., Project Execution Plan needs to adequately identify the changes to document in order to verify that the appropriate approvals are included for each document change.

Responses to prior recommendations are complete; however, several aspects of the risk register should be reviewed. The management of indirect labor rates (01-03) should be reviewed to determine if the rates may be stabilized for the balance of the project. The risk of customer driven design changes (02-03) should be reviewed in an effort to reduce the consequence and severity from “very high” and “high”, respectively, by limiting project liability. Late equipment/material deliveries by GC (03-08) should be reviewed to determine if request for proposals or contract clauses (e.g., delay of project) can reduce the high probability (50%); and high consequence and severity. Owner-caused delays (03-09) should also be reviewed to reduce risks in the same areas.

5.2 Recommendation

4. Proceed to CD-3b.

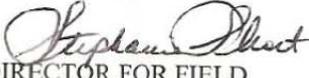
Appendix A Charge Memo



Department of Energy
Office of Science
Washington, DC 20585

JUN 11 2015

MEMORANDUM FOR STEPHEN W. MEADOR
DIRECTOR
OFFICE OF PROJECT ASSESSMENT

FROM: STEPHANIE A. SHORT 
ASSOCIATE DEPUTY DIRECTOR FOR FIELD
OPERATIONS

SUBJECT: Independent Project Review (IPR) of the Utilities Upgrade
Project (UUP) at Fermi National Accelerator Laboratory
(FNAL)

I request that you organize an IPR of the UUP project at FNAL the week of August 10, 2015. The purpose of this IPR is to assess the project's overall readiness for Critical Decision (CD)-3b, Approve Start of Construction – Phase B.

The UUP project obtained approval of CD-0 on September 18, 2009, and CD-1 on November 15, 2010. To expedite the start and completion of this project, the CDs for the UUP project are tailored to allow procurement and construction to proceed in two phases. The UUP project obtained approval of CD-2 and CD-3a on February 18, 2015.

The committee should consider progress and performance to date and, in carrying out its charge, should consider the following questions when evaluating CD-3b readiness:

1. At this stage of the project, is the project scope, if successfully completed, sufficient to achieve the project's key performance parameters?
2. Is the bid solicitation package for Phase B scope consistent with the approved Project Execution Plan? Are bids or quotes already in hand? If so, are the base bids or quotes within the cost estimates, and consistent with the approved cost and schedule performance baseline?
3. Are cost, schedule, and scope contingency adequate to address the remaining risks? Are project risks being actively managed?
4. Are environment, safety and health requirements properly addressed? Are Integrated Safety Management principles being followed?
5. Has the Integrated Project Team responded appropriately to recommendations from prior reviews including those applicable to the proposed Phase B work?

David Michlewicz will serve as the Office of Operations Program Management point of contact for this review. If you have any questions, please call David at (301) 903-8432. I would appreciate receiving your office's report within 60 days of the conclusion of the review.

cc:

R. Won, SC-28
S. Trischman, SC-33
G. Brown, SC-33
D. Michlewicz, SC-33
S. Neus, FSO
R. Alber, FNAL
K. Collins, FNAL

Appendix B Review Committee

**DOE/SC (CD-3b) Review of the
Utilities Upgrade Project (UUP)
August 11-12, 2015**

REVIEW COMMITTEE PARTICIPANTS

Department of Energy

Ray Won, DOE/SC, Chair

Review Committee

Subcommittee 1: Technical

*Shane Wells, SLAC
Michael Finder, ANL

Subcommittee 2: ES&H

*Betsy Dunn, ANL
Neil Gerrish, PPPL

Subcommittee 3: Cost and Schedule

*Stephen Langish, PPPL
Laurie Casarole, BNL
Jesse Saldivar, DOE/SSO

Subcommittee 4: Management

*Gary Bloom, ORNL
Teresa Danforth, TJNAF
Carolyn Galayda, SLAC

*Lead

Observers

Stephanie Short, DOE/SC
David Michlewicz, DOE/SC
Steve Neus, DOE/FSO

Appendix C Review Agenda

DOE/SC (CD-3b) Review of the Utilities Upgrade Project (UUP) August 11-12, 2015

AGENDA

Tuesday, August 11, 2015—Comitium (WH2SE)

8:00 am	DOE Executive Session— Comitium (WH2SE)	R. Won
8:30 am	Fermilab Welcome- One West (WH1W)	T. Meyer
8:40 am	Project Overview	K. Collins
	<ul style="list-style-type: none">• Operations• Interfaces• Spend-Down Plan	
9:00 am	WBS 1 Project Management	R. Alber
	<ul style="list-style-type: none">• Progress, Status, Performance• CD-3b Scope/Cost/Schedule• Risk Management	
9:45 am	Solicitation Process and Status	J. Hohbein
10:00 am	ES&H Plans and Permits	M. Andrews/K. Sienkiewicz
10:15 am	Break—Available outside One West	
10:30 am	WBS 2 High Voltage	R. Wielgos
11:15 am	WBS 3 Industrial Cooling Water	C. Federowicz
12:00 pm	Lunch— 2nd Floor Crossover	
12:50 pm	Photo for Reviewers/Observers- Atrium	
1:00 pm	Site Tour – Bus Outside Wilson Hall	
2:00 pm	Break - Available Outside Comitium	
2:15 pm	Q&A / Discussions with Full Committee	All
3:15 pm	Subcommittee Breakout Meetings	
	<ul style="list-style-type: none">• Management (Collins/Alber/Hohbein)—Comitium (WH2SE)• Cost and Schedule (Marcum/Elrafih)—Chiefs (WH2E)• ES&H/Construction (Andrews/Sienkiewicz/Foutch)—Black Hole (WH2NW)• Technical - HV (Wielgos/ICW (Federowicz)—Snake Pit (WH2NE)	
4:15 pm	DOE Full Committee Executive Session— Comitium (WH2SE)	
5:00 pm	Adjourn	

Wednesday, August 12, 2015 – Comitium (WH2SE)

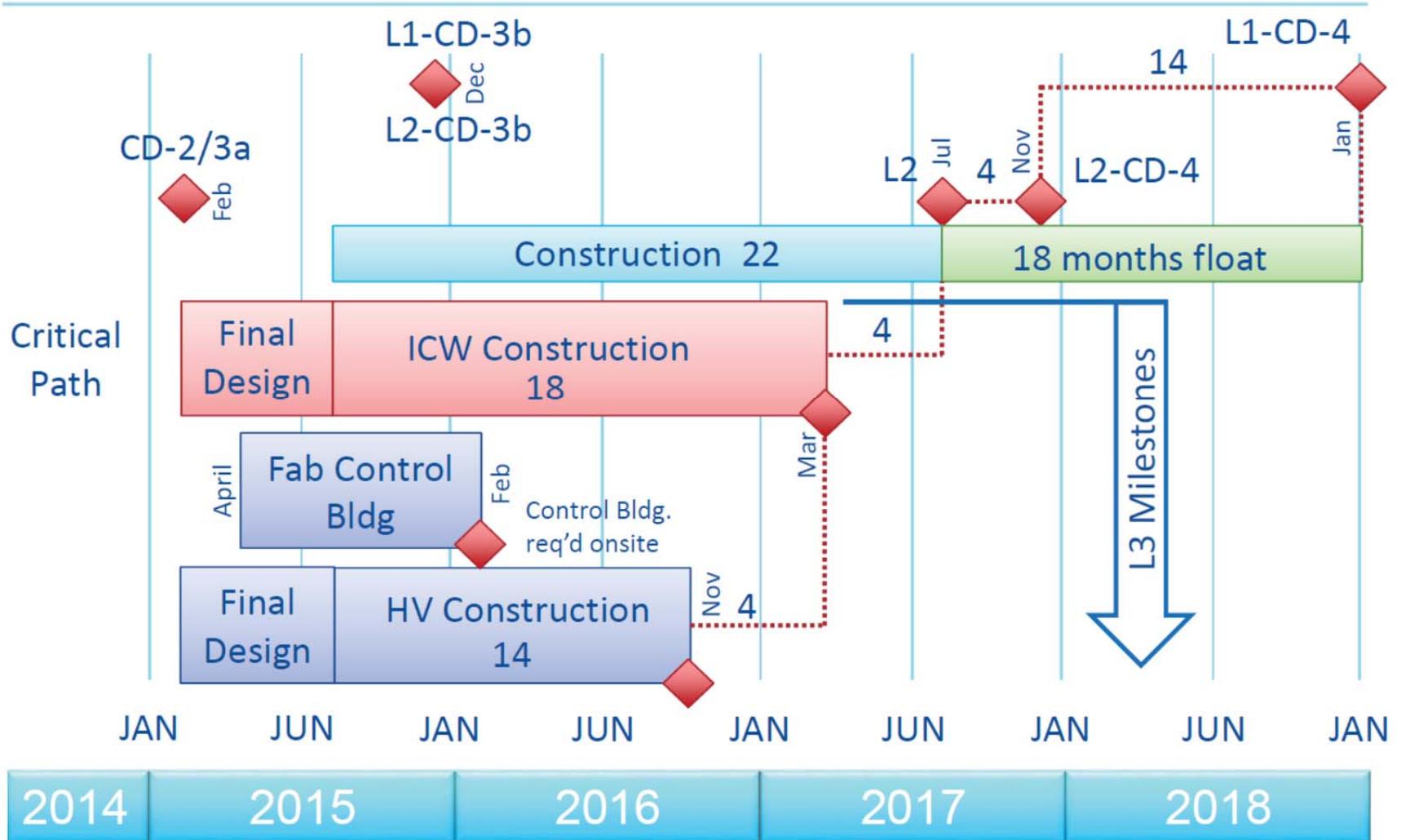
8:00 am	Breakout Q&A / Discussions (if needed) / Report Writing
11:00 am	Dry Run 1 and Coordination with Laboratory
12:30 pm	Box Lunch for Reviewers/Observers
1:30 pm	Revise Reports
3:15 pm	Break – Available Outside Comitium
3:30 pm	Dry Run 2 / Consolidate Closeout Report
4:30 pm	Closeout Presentation— Hornet’s Nest (WH8XO)
5:00 pm	Adjourn

Appendix D UUP Funding Profile

Fiscal Year	FY10	FY11- FY13	FY14 *	FY15- FY16	FY17	Total
Other Project Costs	\$800				\$300	\$1,100
TEC PED			\$4,450			\$4,450
TEC Construction			\$30,450			\$30,450
Total Project Cost (\$K)	\$800		\$34,900		\$300	\$36,000

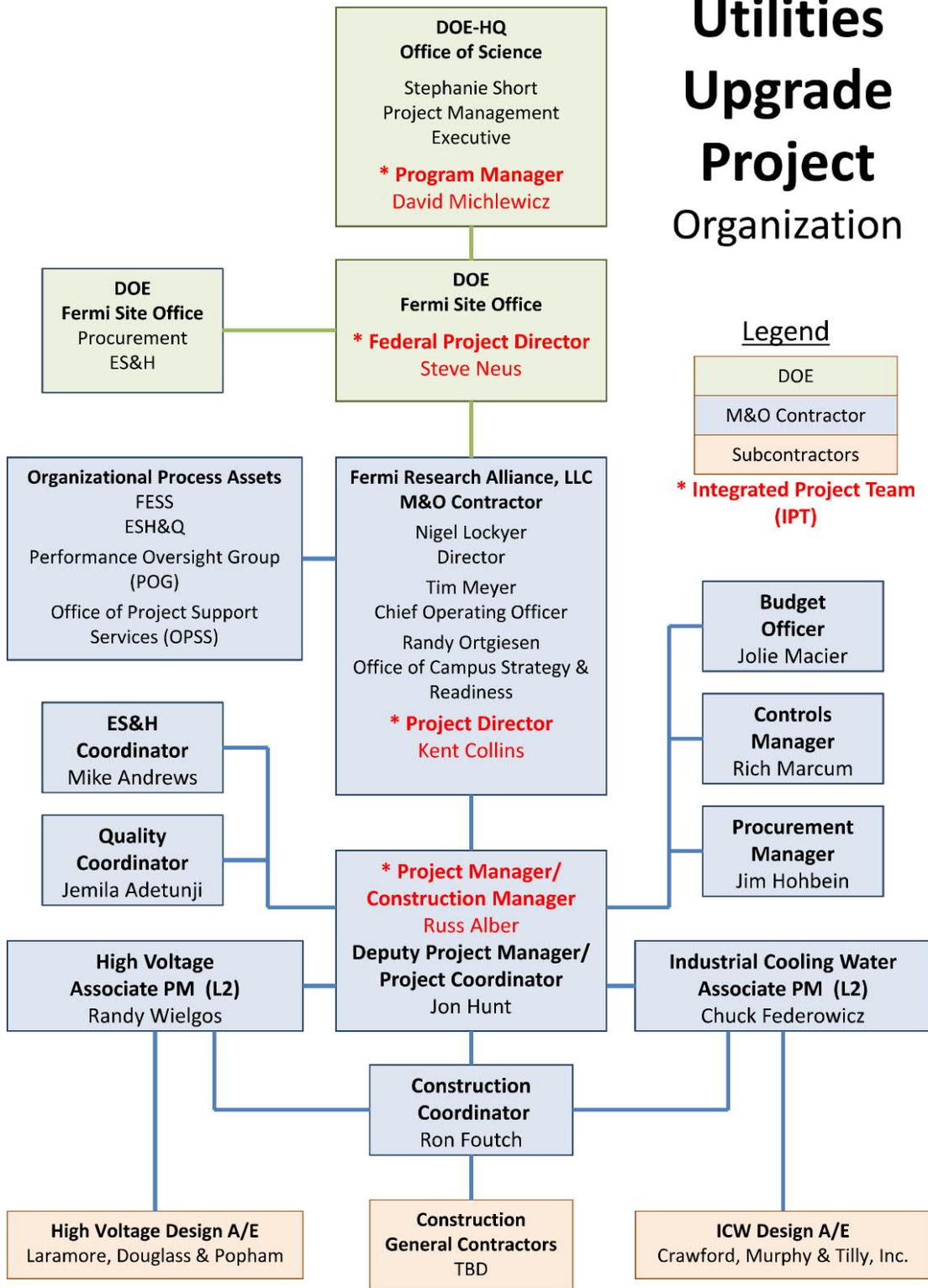
* Project fully funded July 10, 2014

Project Baseline - Summary Schedule

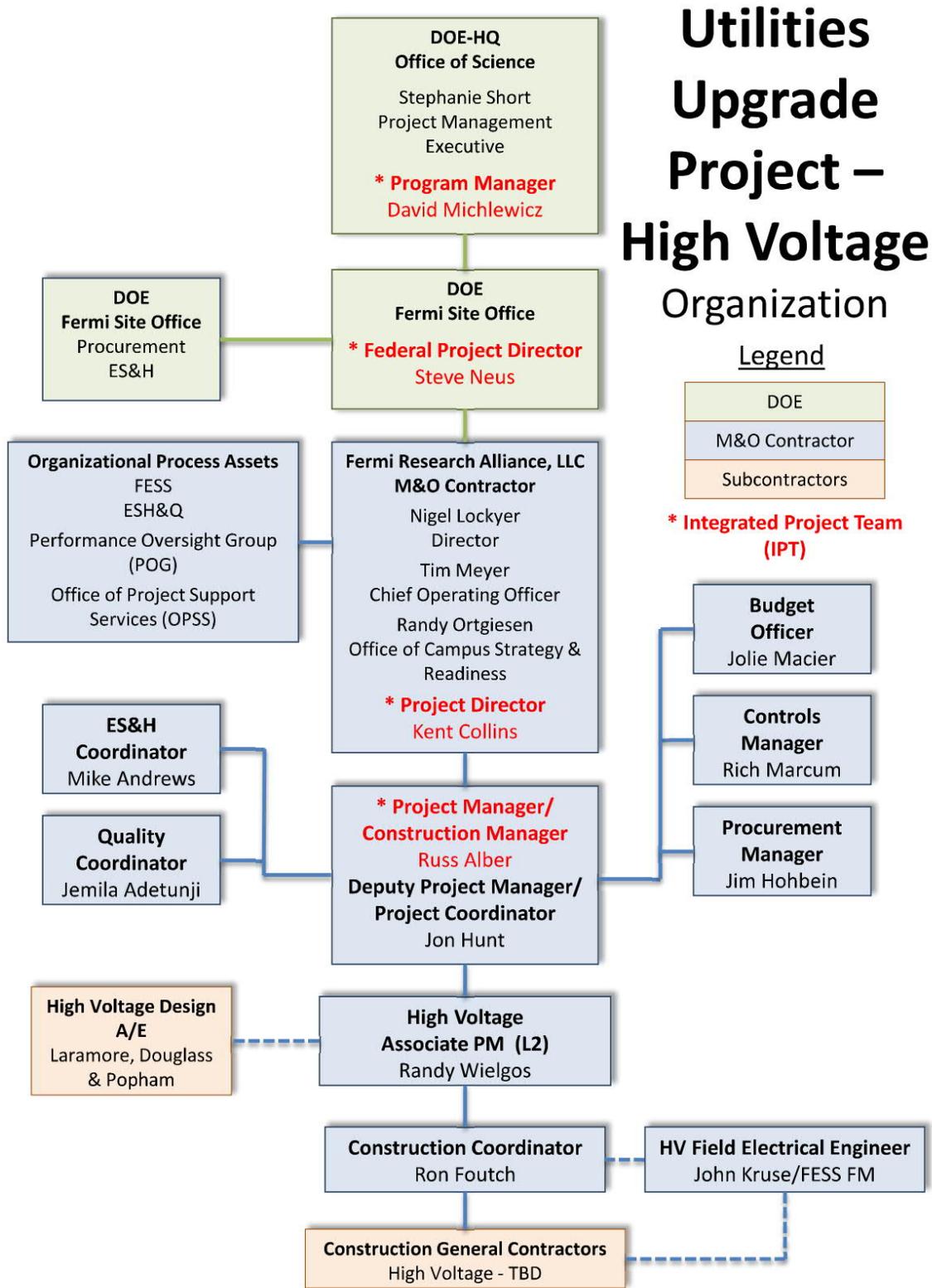


Appendix F UUP Management Chart

Utilities Upgrade Project Organization



Appendix F UUP Management Chart



Appendix F UUP Management Chart

